SuperStack® 3
Advanced RPS
User Guide

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3Com Corporation
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CONTENTS

ABOUT THIS GUIDE

How to Use This Guide 8

Conventions 8

Related Documentation 8

Documentation Comments 9

Product Registration 9

INTRODUCING THE ADVANCED RPS

About the Advanced RPS 11

Advanced RPS Chassis — Front View Detail 12

- LEDs 12

Advanced RPS Chassis — Rear View Detail 13

- Power Sockets (Mains AC Power) 13
- Power Module Slots 14
- Management Module Slot 14

Power Modules 15

- Type 1 60 W Power Module — 3C16072 15
- Type 1 100 W Power Module — 3C16073 15
- Type 2A (100 W) Power Module — 3C16074A 15
- Type 3 (325 W) Power Module — 3C16075 16

Power Module Cables 16

- Type 1 DC Cables 16
- Type 2 DC Cables 17
- Type 3 DC Cables 17

Using the Advanced RPS 18

- Standard Usage 18
- Managed Redundancy 18

Full Redundancy 19

INSTALLING THE ADVANCED RPS

Unpacking the Advanced RPS 22
Choosing a Suitable Site 22
Rack Mounting 23
Using the Rack Mounting Kit 23
Placing Units On Top of Each Other 24
Installing a Power Module 24
Power Supply and Fuses 25
Connecting the DC Cables 25
Standard DC Cables 26
Optional ‘Y’ DC Cables 26
Powering Up the Advanced RPS 26
Checking for Correct Operation 27
Additional Information 27
Connecting an Uninterruptible Power System (UPS) 28

SAFETY INFORMATION

Important Safety Information 29
L’information de Sécurité Importante 32
Wichtige Sicherheitsinformationen 34
Europe 35

TECHNICAL SPECIFICATIONS

SuperStack 3 Advanced RPS Chassis 37
Power Modules 38
Electrical 38
Type 1 60 W Power Module 38
Type 1 100 W Power Module 38
Type 2A (100 W) Power Module 38
Type 3 (325 W) Power Module 39
Physical Dimensions 39

MODULE CONFIGURATIONS

SuperStack 3 Advanced RPS Chassis Loading Limitations 41
Valid Configurations 41
    Single Module Configurations 41
    Full Redundancy Configurations 43
Invalid Configurations 43
Power Module Usage 43
    Units not supported 47
Obsolete Products 48

TROUBLESHOOTING

TECHNICAL SUPPORT

Online Technical Services 53
    World Wide Web Site 53
    3Com Knowledgebase Web Services 53
    3Com FTP Site 54
Support from Your Network Supplier 54
Support from 3Com 54
Returning Products for Repair 56

INDEX

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REGULATORY NOTICES

ABOUT THIS GUIDE

This guide describes how to install the SuperStack® 3 Advanced Redundant Power System (RPS) and use it to provide redundant and resilient power supplies for your SuperStack units.

The guide is intended for use by network administrators who are responsible for setting up network equipment; consequently, it assumes a basic working knowledge of LANs (Local Area Networks).

CAUTION: *The Type 3 DC Power Module is for installation by suitably qualified service personnel only. Refer to the Type 3 Power Module Installation Guide.*

This guide explains:

- How to install the Advanced RPS.
- How to set up the Advanced RPS to provide the power supply protection you need.

This guide does *not* show you:

- How to manage the Advanced RPS.
- How to install other SuperStack products.

If release notes are shipped with your product and the information there differs from the information in this guide, follow the instructions in the release notes.

Most user guides and release notes are available in Adobe Acrobat Reader Portable Document Format (PDF) or HTML on the 3Com World Wide Web site:

`http://www.3com.com/`

How to Use This Guide

The following table shows where to find specific information in this guide.

If you are looking for:	Turn to:
An overall description of the Advanced RPS.	Chapter 1
How to install the Advanced RPS.	Chapter 2
Safety Information applicable to the Advanced RPS	Appendix A
Technical Information about the Advanced RPS.	Appendix B
Permitted configurations for the Power Modules.	Appendix C
Troubleshooting.	Appendix D
How you can contact 3Com for support.	Appendix E

Conventions

Table 1 lists conventions that are used throughout this guide.

Table 1 Notice Icons

Icon	Notice Type	Description
ℹ	Information note	Information that describes important features or instructions
⚠	Caution	Information that alerts you to potential loss of data or damage to an application, system, or device or potential hazards relating to installation.
⚡	Warning	Information that alerts you to potential personal injury

Related Documentation

The following documents will provide additional useful information.

- *Advanced RPS Type 1 Power Module User Guide* (DUA1607-2AAA0X)
- *Advanced RPS Type 1 'Y' Cable User Guide* (DUA1607-9AAA0X)
- *Advanced RPS Type 2A Power Module User Guide* (DUA1607-4AAA0X)

- *Advanced RPS Type 2 ‘Y’ Cable User Guide* (DUA1607-8AAA0X)
- *Advanced RPS Type 3 Power Module Installation Guide* (DUA1607-5AAA0X)
- *Advanced RPS Type 3 ‘Y’ Cable Installation Guide* (DUA1607-7AAA0X)

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- Document title
- Document part number (on the title page)
- Page number (if appropriate)

Example:

- SuperStack 3 Advanced RPS User Guide
- Part Number DUA1607-0AAA03
- Page 21

Product Registration

You can now register your SuperStack unit on the 3Com web site to receive up-to-date information on your product:

`http://support.3com.com/warrantyregistration/register.pl`

1 INTRODUCING THE ADVANCED RPS

This chapter contains introductory information about the SuperStack® 3 Advanced Redundant Power System (RPS), its associated products, and how they can be used to support your SuperStack network devices. It covers the following topics:

- About the Advanced RPS
- Advanced RPS Chassis — Front View Detail
- Advanced RPS Chassis — Rear View Detail
- Power Modules
- Power Module Cables
- Using the Advanced RPS

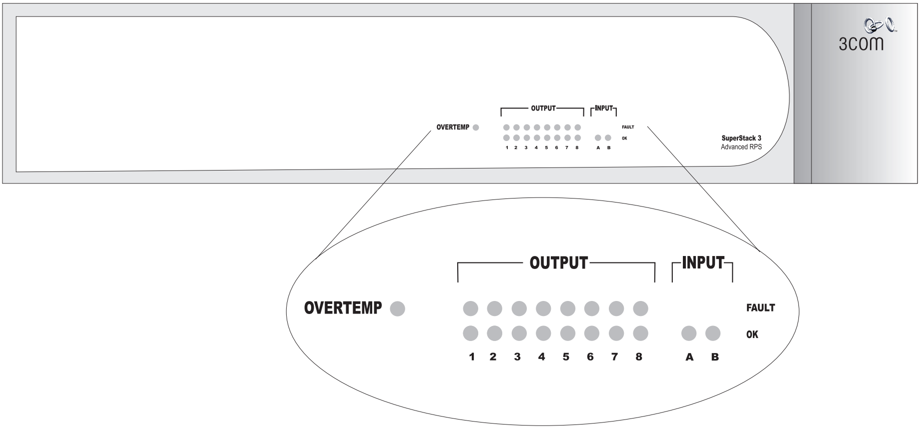
About the Advanced RPS

The SuperStack 3 Advanced RPS offers you the ability to supply power to your SuperStack network devices in the event of a failure of an internal power supply. Alternatively, some SuperStack 3 units can use the Advanced RPS as their default power supply, and if this fails they revert to their internal power supply. Check the Getting Started Guide that accompanies your Switch for more information.'

The Advanced RPS chassis, in combination with a range of power modules and an optional management module allows you to choose the most suitable redundant power solution for your SuperStack network devices. The Advanced RPS can supply power for up to eight SuperStack networking units (subject to the loading limitations detailed in Appendix C).

Advanced RPS Chassis — Front View Detail

Figure 1 Front View of the Advanced RPS Chassis



LEDs

The Advanced RPS chassis has LEDs visible on the front panel that indicate the status of the AC power inputs, the power modules, and the temperature of the chassis itself.

One INPUT LED is allocated to each AC power input socket. Socket A is the right-hand one of the two sockets (labelled Primary Pwr A) when looking at the rear of the unit.

Two OUTPUT LEDs, arranged vertically, are allocated to each power module slot on the rear of the Advanced RPS. The numbering of the slots, when looking at the rear of the unit, is:

- Top row (left to right) — 7, 5, 3, 1
- Bottom row (left to right) — 8, 6, 4, 2

The OVERTEMP LED provides an indication of the chassis temperature status.

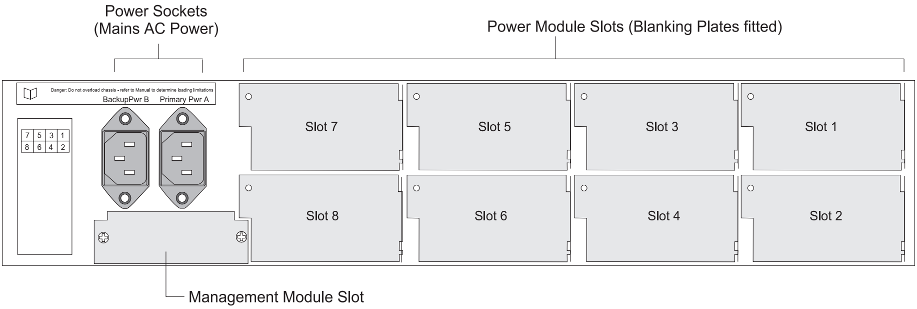
Table 1 lists the LEDs visible on the front of the Advanced RPS chassis and their status according to color. For information on using the LEDs for troubleshooting, see Appendix D.

Table 1 LED behavior

LED	Color	Indicates
AC Power Inlet Status LEDs		
INPUT OK A and B	Green	AC power is connected to relevant input and is OK.
	Off	AC power is not connected to relevant input or there is an AC power fault.
Power Module Status LEDs		
OUTPUT OK	Green	Power module is connected to a SuperStack unit, and is enabled and supplying power.
	Off	Power module is not present, is not enabled, or is not supplying power.
OUTPUT FAULT	Yellow	Power module is required to deliver power but cannot.
	Off	Power module is OK.
Chassis Temperature Status LED		
OVERTEMP	Yellow	Temperature within the Advanced RPS chassis is too high or a fan has failed.
	Off	Temperature and fan operation within the Advanced RPS is OK.

Advanced RPS Chassis — Rear View Detail

Figure 2 Rear View of the Advanced RPS Chassis


Power Sockets (Mains AC Power)
Power Module Slots (Blanking Plates fitted)
Danger: Do not overload chassis - refer to Manual to determine loading limitations
BackupPwr B
Primary Pwr A
7 5 3 1
8 6 4 2
Slot 7
Slot 5
Slot 3
Slot 1
Slot 8
Slot 6
Slot 4
Slot 2
Management Module Slot

Power Sockets (Mains AC Power)

The Advanced RPS chassis has two AC mains inputs, labelled Primary Pwr A and Backup Pwr B. It provides dual phase support, that is, it accepts its mains power from two AC sources that can be from separate phases.

3Com require that you confirm that your chassis supports the dual phase feature by checking that "3C16071A" or "3C16071B" appears on the serial number label on the base of the chassis, the front panel overlay, and also on the packaging label. If the "A" or "B" suffix is not shown, the 3C16071 does not provide dual phase support and must be powered from AC sources of the same phase.

As the Advanced RPS chassis (3C16071B) can be powered from different phases, it is possible to connect one of the mains inlets to an Uninterruptible Power System (UPS), such as the SuperStack UPS.

The Advanced RPS chassis will always draw power through mains inlet A (labelled Primary Pwr A) in preference to inlet B (labelled Backup Pwr B). You should ensure that your primary power source is always connected to inlet A, and the backup supply connected to inlet B.

If the power to inlet A fails, the chassis will reset and switch to use inlet B. If the power to inlet A recovers, the chassis will reset again and change back to use its primary power source, inlet A. The reset time is approximately 13 seconds.

Power Module Slots

You can fit a selection of power modules into the chassis. Refer to "Power Modules" on page 15 for details of the power modules available to fit in the chassis. The numbering of the power module slots, when looking at the rear of the unit, is:

- Top row (left to right) — 7, 5, 3, 1
- Bottom row (left to right) — 8, 6, 4, 2

Management Module Slot

You can use this slot to install an optional management module (3C16080) into the rear of the Advanced RPS chassis. It allows full management of the Advanced RPS via SNMP (Simple Network Management Protocol).

With an SNMP manager, such as the 3Com Transcend® Network Manager, you have access to the management data over a network connection. You can also receive traps sent by the module.

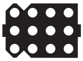
Power Modules

There are four power modules available that offer different DC power outputs. Select the appropriate module for each SuperStack unit you want to connect to the chassis. Details of the SuperStack equipment requirements are given in Appendix C and the manual that accompanies the power module. You may also find these details in the manual that accompanies your networking product.

Type 1 60 W Power Module — 3C16072

This module is suitable for powering a specific range of SuperStack units. See Appendix C for a list of these units. A standard DC power cable is supplied with each module. A front view of the module connector is shown in Figure 3.

Figure 3 Front View of Connector for 3C16072 and 3C16073 (Type 1)



Type 1 100 W Power Module — 3C16073

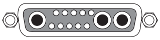
This module is suitable for powering a specific range of SuperStack units. See Appendix C for a list of these units. A standard DC power cable is supplied with each module. A front view of the module connector is shown in Figure 3.

Type 2A (100 W) Power Module — 3C16074A

This module is suitable for powering a specific range of SuperStack units. See Appendix C for a list of these units. This module provides an extra power rail at 3.3 V through the connector shown in Figure 4. A Type 2 DC power cable is supplied with each module.

CAUTION: *The Advanced RPS chassis (3C16071A and 3C16071B) does not support the Type 2 Power Module (3C16074). You must use a Type 2A Power Module (3C16074A).*

Figure 4 Front View of Connector for 3C16074A (Type 2A)



Type 3 (325 W) Power Module — 3C16075

This module is suitable for powering a specific range of SuperStack units. See Appendix C for a list of these units. This module provides +27 V through the connector. A Type 3 DC power cable is supplied with each module.

***CAUTION:** The Type 3 DC Power Module is for installation by suitably qualified service personnel only. Refer to the Type 3 Power Module Installation Guide.*

If you cannot find your SuperStack unit listed in Appendix C, consult the User Guide that accompanied the unit for its DC power rating, or your supplier.

Power Module Cables

There are two types of DC cable available for each power module:

- Standard DC Cable — supplied with each power module.

  Use the standard DC cable to provide power redundancy by connecting the outlet of the power module to the Redundant Power System socket on the rear of the SuperStack unit.
- Optional ‘Y’ DC Cable — obtained from your supplier.

  Use a DC ‘Y’ cable of the appropriate type to provide full redundancy by connecting the two short leads to two power module outlets and the long lead to the Redundant Power System socket on the rear of the SuperStack unit.

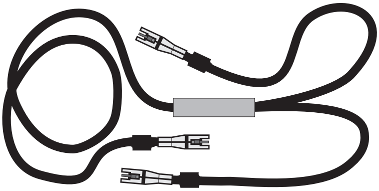
***CAUTION:** Do not attempt to use a ‘Y’ Cable to power two separate SuperStack units. The equipment may not operate.*

Type 1 DC Cables

Use a standard DC cable, supplied with each Type 1 60 W and 100 W Power Module, to connect a Type 1 Power Module to a SuperStack unit.

An optional ‘Y’ DC cable (3C16079) is available to connect two Type 1 60 W or two Type 1 100 W Power Modules to a SuperStack unit for full redundancy.

Figure 5 Type 1 DC ’Y’ Cable (3C16079)



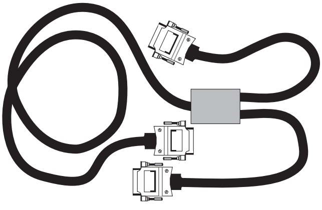
Type 2 DC Cables

Use a Type 2 DC cable, supplied with each Type 2A Power Module, to connect a Type 2A Power Module to a SuperStack unit.

An optional Type 2 ’Y’ DC cable (3C16078) is available to connect two Type 2A Power Modules to a SuperStack unit for full redundancy.

Type 2 DC cables can be used with the Type 2 Power Module (3C16074) or the Type 2A Power Module (3C16074A).

Figure 6 Type 2 DC ’Y’ Cable (3C16078)



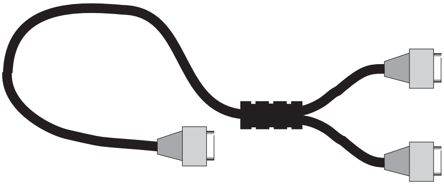
Type 3 DC Cables

Use a Type 3 DC cable, supplied with each Type 3 Power Module, to connect a Type 3 Power Module to a SuperStack unit.

An optional Type 3 ’Y’ DC cable (3C16077) is available to connect two Type 3 Power Modules to a SuperStack unit for full redundancy.

CAUTION: *The Type 3 DC Power Module is for installation by suitably qualified service personnel only. Refer to the Type 3 Power Module Installation Guide.*

Figure 7 Type 3 DC 'Y' Cable (3C16077)



Using the Advanced RPS

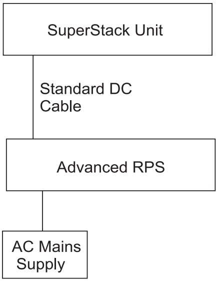
There are several ways you can use the Advanced RPS to benefit your network and protect against internal PSU failure on your SuperStack units. These are detailed below.

Standard Usage

Connect your SuperStack unit directly to the power module using the standard DC cable supplied with the module (see Figure 8). The power module acts as a highly reliable power supply that can be swapped in the event of a failure.

CAUTION: *Do not connect your SuperStack units to the AC mains supply.*

Figure 8 Advanced RPS Standard Usage Configuration



Managed Redundancy

Managed Redundancy can only be used with a SuperStack unit that has the auto-enable feature. For units that support this feature, see Appendix C.

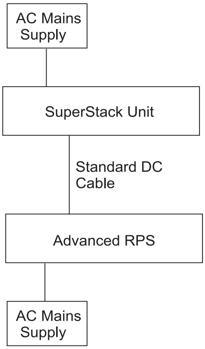
The SuperStack unit is supplied with power from an AC mains supply. A power module is connected using the standard DC cable to the RPS socket on the SuperStack unit (see Figure 9). If the internal power supply fails, the SuperStack unit enables the Advanced RPS.

CAUTION: *If the product you are connecting to the power module does not have the auto-enable feature, ensure the mains cable is removed from it before attempting to connect it to the Advanced RPS.*

When the Advanced RPS takes over supplying power to the SuperStack unit, the unit may reset, as in a power cycle.

Some SuperStack units, when set up in this configuration, can use the Advanced RPS as their primary source of power. In the case of Advanced RPS failure, the SuperStack unit's own PSU acts as a redundant power supply and will take over supplying power to the SuperStack unit. Please refer to the documentation that accompanies the SuperStack unit for more information.

Figure 9 Advanced RPS Managed Redundancy Configuration



Full Redundancy

This is the mission-critical mode of use, offering full redundancy. This configuration provides the most resilience for your network.

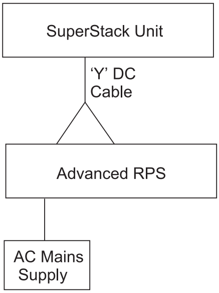
The SuperStack unit takes no power from the AC mains supply, and should not be directly supplied with mains power. A 'Y' cable connects two power modules to the unit, providing full redundancy (see Figure 10).

Make sure you use the correct type of 'Y' cable for the right module combination. See "Power Modules" on page 15 for front views of the different connectors.

If one of the power modules fails, the other module will take the full load. The faulty module can be "hot-swapped", that is, you do not need to remove power from the chassis before you remove or insert a power module, to return the system to full redundancy. This prevents the reset that occurs in the managed redundancy mode.

Refer to the Advanced RPS Type 3 Power Module Installation Guide and Advanced RPS Type 3 'Y' Cable Installation Guide.

Figure 10 Advanced RPS Full Redundancy Configuration



2

INSTALLING THE ADVANCED RPS

***CAUTION:** The Type 3 DC Power Module is for installation by suitably qualified service personnel only. Refer to the Type 3 Power Module Installation Guide.*

This chapter contains the information you need to install and set up the SuperStack® 3 Advanced RPS chassis. It covers the following topics:

- Unpacking the Advanced RPS
- Choosing a Suitable Site
- Rack Mounting
- Installing a Power Module
- Connecting the DC Cables
- Powering Up the Advanced RPS

***WARNING: Safety Information.** Before installing or removing any components from the SuperStack 3 Advanced RPS or carrying out any maintenance procedures, you must read the safety information provided in Appendix A of this guide.*

***AVERTISSEMENT: Consignes de sécurité.** Avant d'installer ou d'enlever tout composant du SuperStack 3 Advanced RPS ou d'entamer une procédure de maintenance, lisez les informations relatives à la sécurité qui se trouvent dans l'Appendice A de ce guide.*

***WARNHINWEIS: Sicherheitsinformationen.** Bevor Sie Komponenten aus dem SuperStack 3 Advanced RPS hinzufuegen oder Instandhaltungsarbeiten verrichten, lesen Sie die Sicherheitsanweisungen, die in Appendix A (Anhang A) in diesem Handbuch aufgefuehrt sind.*

Unpacking the Advanced RPS

The Advanced RPS packaging contains:

- A chassis (3C16071B)
- Two mains power cords
- A rack mounting kit (two mounting brackets and eight screws)
- Four self-adhesive rubber pads (feet)
- This manual
- Registration information

Choosing a Suitable Site

CAUTION: *Ensure there is free air flow around and through the vents on either side of the Advanced RPS.*

When deciding where to site the Advanced RPS ensure:

- It is accessible and cables can be connected easily.
- Cabling is away from:
  - Sources of electrical noise such as radio transmitters, broadband amplifiers, and heavy electrical equipment.
  - Power lines and fluorescent lighting fixtures.
- Water or moisture cannot enter the case of the unit.
- Air flow around the unit and through the vents in the side of the case is not restricted (3Com recommend that you provide a minimum of 75-mm (3-in.) clearance).

To prolong the operational life of your units:

- Never stack units more than eight high on top of the Advanced RPS.
- Do not place objects on top of any unit or stack.
- Do not obstruct any vents at the sides of the case.
- Ensure the environment is within the operating range of the product as detailed in Appendix B.

Rack Mounting

The Advanced RPS is 2U high and can be mounted in a 19-in. equipment rack. The rack must be well ventilated — 3Com recommend using an open frame type.

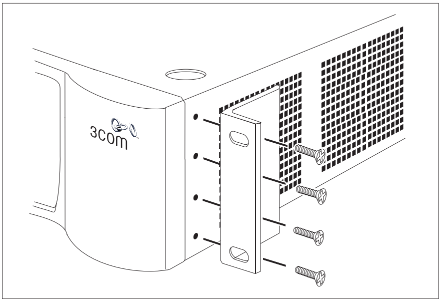
3Com recommend that runners or a tray be fitted in the rack to support the weight of the Advanced RPS chassis when installed into the rack.

Using the Rack Mounting Kit

The Advanced RPS is supplied with two mounting brackets and eight screws. These may be used to secure the unit to the rack when using runners or a tray. When mounting the unit, you should take note of the guidelines given below.

CAUTION: *Disconnect all cables from the Advanced RPS before continuing. Remove the self-adhesive pads from underside of unit, if already fitted.*

Figure 11 Fitting a bracket for rack mounting



1. Place the unit the right way up on a hard, flat surface.
2. Locate a mounting bracket over the mounting holes on one side of the unit, as shown in Figure 11.
3. Insert the four screws and fully tighten with a suitable screwdriver.
4. Repeat steps 2 and 3 for the other side of the unit.
5. Insert the unit into the 19-in. rack on pre-installed runners, tray, or other support, and secure with suitable screws (not provided).

6 Connect all cables.

Placing Units On Top of Each Other

CAUTION: *Do not place the Advanced RPS alongside your SuperStack® units, as this can impede air flow through the Advanced RPS.*

You may stack up to eight of the allowable units (see Appendix C) in a free-standing stack or, if runners or a tray give extra support, on a rack-mounted Advanced RPS. The narrower units must be positioned at the top of the stack.

If you are placing units one on top of the other, you must use the self-adhesive rubber pads supplied. Apply the pads to the underside of each unit, sticking one in the marked area at each corner. Place the units on top of each other, ensuring that the pads of the upper unit line up with the recesses of the lower unit.

Installing a Power Module

CAUTION: *The Type 3 DC Power Module is for installation by suitably qualified service personnel only. Refer to the Type 3 Power Module Installation Guide.*

CAUTION: *Never plug a hot power module into the Advanced RPS. You may damage the power module. Allow 10 minutes for the unit to cool down before inserting it into the power module slot. This will permit the surge control circuitry to reset.*

CAUTION: *It is important that the power modules are cooled effectively. We strongly recommend installing the power modules as evenly as possible between the top and bottom slots of the Advanced RPS chassis.*

CAUTION: *When removing a power module that has just been operating, beware of hot components.*

CAUTION: *Do not operate the Advanced RPS continuously with any of the rear slots open. Replace the blanking plate to help prolong the life of your unit.*

CAUTION: *If you need to replace a Power Module used in full redundancy configuration, remove the 'Y' cable connection from it before removing the module.*

Remember the cold power module will not supply power for about 5 seconds.

You can "hot-insert" the Advanced RPS Power Modules in to the chassis, that is, you do not need to remove power from the chassis before you insert a power module.

Refer to the Advanced RPS Type 3 Power Module Installation Guide and Advanced RPS Type 3 'Y' Cable Installation Guide.

Details of the permissible combinations of modules and 3Com products are given in Appendix C and the user guide which accompanies the modules.

To install a power module:

CAUTION: *The Type 3 DC Power Module is for installation by suitably qualified service personnel only. Refer to the Type 3 Power Module Installation Guide.*

1. Take off the blanking plate by removing the fixing screws. Keep the blanking plate and screws in a safe place. If you remove the module at any time, you must replace the blanking plate.
2. Hold the power module so that any text on the front panel is upright, and insert it into the chassis, sliding the module into the runners. Push firmly to ensure the connectors are fully engaged.
3. Secure the module with the screws provided using a suitable tool.

Power Supply and Fuses

All power is supplied and fused from the Advanced RPS chassis. There are no user-replaceable fuses on the power module.

Connecting the DC Cables

The Advanced RPS and its modules can be "hot-connected" to SuperStack units, that is, you do not need to remove power from the chassis or other units to connect the cables.

CAUTION: *The Type 3 DC Power Module is for installation by suitably qualified service personnel only. Refer to the Type 3 Power Module Installation Guide.*

CAUTION: *Only use the cables designed for the power module you are installing.*

CAUTION: *When mating the RPS connectors to the inlet and outlet sockets, take special care to ensure that the retaining spring, where fitted, locates outside the plug casing.*

CAUTION: *If Type 3 Power Module DC cables are used, all screws must be tightened with a suitable tool.*

Standard DC Cables

Use the standard DC cable supplied with the power module to provide power redundancy. If the power module has a protective cover over the D-type connector, remove this first and keep somewhere safe as it will need to be replaced if you remove the cable at any time.

Connect one end of the cable to the power module outlet and the other end of the cable to the Redundant Power System socket on the rear of the SuperStack unit. For more information, refer to the documentation that accompanies the power module you are installing.

Optional ‘Y’ DC Cables

Refer to the Advanced RPS Type 3 Power Module Installation Guide and Advanced RPS Type 3 ‘Y’ Cable Installation Guide.

Use a DC ‘Y’ cable of the appropriate type (available from your supplier) to provide full redundancy (resilience).

Connect one short lead to each of the two module outlets and the long lead to the Redundant Power System socket on the rear of the SuperStack unit. For more information, refer to the documentation that accompanies the power module and the ‘Y’ cable you are installing.

CAUTION: *Do not attempt to use a ‘Y’ cable to power two separate SuperStack units. The equipment will not operate.*

Powering Up the Advanced RPS

Once the Advanced RPS is in place, you can power up the unit.

1. Connect the AC power cord(s) to the power sockets (mains AC power inlets) at the rear of the RPS. The chassis will always draw power through mains inlet A (labelled Primary Pwr A) in preference to inlet B (labelled Backup Pwr B). You should ensure that your primary power source is always connected to inlet A, and the backup supply connected to inlet B. If using just one AC cable connect it to mains inlet A.
2. Connect the DC cables to the power modules and SuperStack units, if you have not already done so. See “Connecting the DC Cables” on page 25.
3. Once all the cables are securely connected, the Advanced RPS is ready to operate. There is no ON/OFF switch on the Advanced RPS. To start the Advanced RPS, plug the AC power cord(s) into a mains outlet.

Checking for Correct Operation

When powered up, the INPUT LEDs should light green. Only one LED lights if there is only one AC power cord connected. If a power module is supplying power to a SuperStack unit then the OUTPUT LED corresponding to this power module will light green. See “LEDs” on page 12.

There is an approximate 5-second time delay after power up before the power module becomes active and the LED lights on the chassis front panel.

Additional Information

Many products in the SuperStack range have an auto-enable feature. These products are indicated with an asterisk (*) in Appendix C. This permits the SuperStack product to be connected to the mains and to the Advanced RPS at the same time. This is called managed redundancy. With Type 1 and 2 Power Modules configured for managed redundancy, if the SuperStack unit’s mains fails, the Advanced RPS will automatically cut in to provide power to the SuperStack unit after about 5 seconds. The unit may reset, as in a power cycle.

With a Type 3 Power Module configured for managed redundancy, if the SuperStack unit's mains fails, the power module will automatically cut in to provide power, without the unit experiencing a reset. If the SuperStack unit's mains returns, it will default back to running on its internal power supply, without experiencing a reset. The module will resume standby operation.

Some SuperStack units, when set up for managed redundancy, will use the Advanced RPS as their primary source of power. In the event of Advanced RPS failure, the SuperStack unit's own PSU acts as a redundant power supply and will take over supplying power to the SuperStack unit. Please refer to the documentation that accompanies the SuperStack unit for more information.

If the product you wish to connect does not have the auto-enable feature, ensure the power cord is removed from it before attempting to connect the Advanced RPS.

Connecting an Uninterruptible Power System (UPS)

CAUTION: *It is important that, if you use a UPS to supply the Advanced RPS, you use only one UPS output to supply the RPS.*

The 3Com UPS will supply 325 W input power. Hence the maximum output DC power of the Advanced RPS is reduced to about 200 W.

A

SAFETY INFORMATION

You must read the following safety information before carrying out any installation or removal of components, or any maintenance procedures on the SuperStack 3 Advanced RPS.

WARNING: *Warnings contain directions that you must follow for your personal safety. Follow all directions carefully.*
You must read the following safety information carefully before you install or remove the unit.

AVERTISSEMENT: *Les avertissements présentent des consignes que vous devez respecter pour garantir votre sécurité personnelle. Vous devez respecter attentivement toutes les consignes.*
Nous vous demandons de lire attentivement les consignes suivantes de sécurité avant d'installer ou de retirer l'appareil.

WARNHINWEIS*: Warnhinweise enthalten Anweisungen, die Sie zu Ihrer eigenen Sicherheit befolgen müssen. Alle Anweisungen sind sorgfältig zu befolgen.*
Sie müssen die folgenden Sicherheitsinformationen' sorgfältig durchlesen, bevor Sie das Gerät installieren oder ausbauen.

Important Safety Information

Please read the following safety information before installing the Advanced RPS Chassis.

CAUTION: *The Type 3 DC Power Module is for installation by suitably qualified service personnel only. Refer to the Type 3 Power Module Installation Guide.*

Installation and removal of the unit must be carried out by suitably qualified service personnel only.

WARNING*: Do not overload the chassis — refer to Table 2 "Maximum Number of Advanced RPS Power Modules per Chassis" to* *determine loading limitations. It is important that the loading limitations are not exceeded.*

- Connect the unit to an earthed power supply to ensure compliance with safety standards.
- It is essential that the socket outlet is installed near to the unit and is easily accessible. You can only disconnect the unit by removing the supply plug from the outlet.
- If installing the Advanced RPS Chassis in a stack with SuperStack units, place the Advanced RPS Chassis at the bottom of the stack.
- This unit operates under SELV conditions (Safety Extra Low Voltage) according to IEC 60950, the conditions of which are maintained only if the equipment to which it is connected also operates under SELV.
- The appliance coupler (the connector to the device itself and not the wall plug) must have a configuration for mating with an EN60320/IEC320 appliance inlet.
- Use only the special cables designed and supplied for this product.
- Power Cord Set:
  This must be approved for the country where it is used:

U.S.A. and Canada	■ The cord set must be UL-approved and CSA certified. ■ The minimum specification for the flexible cord is: No. 18 AWG Type SV or SJ 3-conductor ■ The cord set must have a rated current capacity of at least 10A. ■ The attachment plug must be an earth-grounding type with a NEMA 5-15P (15A, 125V) or NEMA 6-15P (15A, 250V) configuration.
United Kingdom only	■ The supply plug must comply with BS1363 (3-pin 13 amp) and be fitted with a 5A fuse which complies with BS1362. ■ The mains cord must be <HAR> or <BASEC> marked and be of type H03VVF3GO.75 (minimum).

Europe only:	■ The supply plug must comply with CEE 7/7 (“SCHUKO”). ■ The mains cord must be <HAR> or <BASEC> marked and be of type H03VVF3GO.75 (minimum).
Denmark	■ The supply plug must comply with section 107-2-D1, standard DK2-1a or DK2-5a.
Switzerland	■ The supply plug must comply with SEV/ASE 1011.

France and Peru Only

This unit cannot be powered from IT[†] supplies. If your supplies are of IT type, this unit must be powered by 230 V (2P+T) via an isolation transformer of ratio 1:1, with the secondary connection point labelled Neutral, connected directly to Earth (Ground).

[†] Impédance à la terre

- 3Com require that you confirm that your chassis supports the dual phase feature by checking that “3C16071A” or “3C16071B” appears on the serial number label on the base of the chassis, the front panel overlay, and also on the packaging label. If the “A” or “B” suffix is not shown, the 3C16071 does not provide dual phase support and must be powered from AC sources of the same phase.
- Disconnect both AC power leads before servicing.

L’information de Sécurité Importante

Veuillez lire à fond l'information de la sécurité suivante avant d'installer l’Advanced RPS.

ATTENTION*: le Power Module de Type 3 doit être installé uniquement par le personnel qualifié. Se réféfer au manuel d'installation du Power Module de Type 3.*

L'installation et la depose de l'unité sont à effectuer uniquement par du personnel de maintenance competent.

ATTENTION*: Ne surchargez pas le châssis — référez-vous au Tableau 2 "Maximum Number of Advanced RPS Power Modules per Chassis" pour déterminer les limitations de charge. Il est important que ces limitations de chargement ne soient pas excédées.*

- Brancher l'unité à une source de courant mise à la terre pour assurer la conformité aux normes de sécurité.
- C'est essentiel que le socle soit installé près de l'unité et soit accessible. Vous pouvez seulement débrancher l'unité en enlevant la fiche d'alimentation de la prise de courant.
- Si vous installez le Advanced RPS Chassis dans une pile de modules SuperStack, placez le Advanced RPS Chassis en bas de la pile
- Cette unité marche sous les conditions SELV (Safety Extra Low Voltage) conformément à IEC 60950, ces conditions sont maintenues seulement si le matériel auquel elle est branchée, est aussi en exploitation sous SELV.
- Le socle de connecteur, c'est-à-dire, le connecteur à l'appareil lui-même et non pas la prise murale, doit avoir une configuration pour le branchement avec une admission d'appareil EN60320/IEC320.
- Utilisez uniquement les câbles spécialement conçus et livrés pour ce produit.

- Cordon électrique:
  Il doit être agréé dans le pays d'utilisation:

Etats-Unis et Canada	■ Le cordon doit avoir reçu l'homologation des UL et un certificat de la CSA
	■ Le cordon souple doit respecter, à titre minimum, les spécifications suivantes :
	■ calibre 18 AWG
	■ type SV ou SJ
	■ à 3 conducteurs
	■ Le cordon doit être en mesure d'acheminer un courant nominal d'au moins 10 A
	■ La prise femelle de branchement doit être du type à mise à la terre (mise à la masse) et respecter la configuration NEMA 5-15P (15 A, 125 V) ou NEMA 6-15P (15 A, 250 V)
Danemark	■ La prise mâle d'alimentation doit respecter la section 107-2 D1 de la norme DK2 1a ou DK2 5a
Europe	■ La prise secteur doit être conforme aux normes CEE 7/7 (“SCHKO”)
	■ LE cordon secteur doit porter la mention <HAR> ou <BASEC> et doit être de type HO3VVF3GO.75 (minimum).
Suisse	■ La prise mâle d'alimentation doit respecter la norme SEV/ASE 1011

Seulement Pour La France et Le Pérou

Cette unité ne peut pas être mise en marche des sources de courant IT (Impédance à la terre). Si vos sources de courant sont de type IT, cette unité doit être alimentée par 230 V (2P+T) via un rapport de transformation d'isolation de 1:1, avec un point de connexion secondaire étiqueté Neutre, branché directement à la Terre (à la Masse).

- A la requête de 3Com, vous devez confirmer que votre châssis fournit la fonction double phase en vérifiant que le numéro 3C16071A ou 3C16071B est indiqué sur l'étiquette du numéro de série en bas du châssis, sur le panneau avant et également sur l'étiquette d'emballage. Si le suffixe A ou B n'est pas indiqué, le 3C16071 ne fournit pas la fonction double phase et il faut le mettre sous tension à partir des sources de courant alternatif de la même phase.

- Débranchez les conducteurs électriques secteur avant de procéder à une intervention d'entretien courant.

Wichtige Sicherheitsinformationen

Bitte unbedingt vor dem Einbauen des Advanced RPS Einheit die folgenden Sicherheitsanweisungen durchlesen.

***WARNUNG**: Die Installation des Stromversorgungsmoduls darf ausschließlich von hinreichend ausgebildetem Wartungspersonal durchgeführt werden. Lesen Sie dazu im Type 3 Power Module Installation Guide nach.*

Der Ein- und Ausbau der Anlage ist nur von ausgebildetem Wartungspersonal auszuführen.

***WARNUNG**: Bitte überladen Sie nicht das Chassis — bezugnehmend auf Tabelle 2 "maximale Anzahl der Advanced RPS Powermodule per Chassis" und halten Sie die Limitierung ein. Es ist wichtig, daß Sie die Limitierung nicht überschreiten.*

- Das Gerät an geerdete Stromversorgung anschließen, um eine Übereinstimmung mit den Sicherheitsbestimmungen zu gewährleisten.
- Es ist wichtig, daß der Netzstecker sich in unmittelbarer Nähe zum Gerät befindet und leicht erreichbar ist. Das Gerät kann nur durch Herausziehen des Verbindungssteckers aus der Steckdose vom Stromnetz getrennt werden.
- Beim Einbau des Advanced RPS Chassis in einen Stack mit SuperStack Einheiten wird das Advanced RPS Chassis unten in den Stack gesetzt.
- Das Gerät wird mit Sicherheits-Kleinspannung nach IEC 60950 (SELV = Safety Extra Low Voltage) betrieben. Angeschloßen werden können nur Geräte, die ebenfalls nach SELV betrieben werden.
- Die Anordnung der Gerätsteckvorrichtung, d.h. die Steckverbindung am Gerät selbst im Gegensatz zum Wandstecker, muß in den EN60320/IEC320 Zuführungsstecker am Gerät passen.
- Der Anschlußkabelsatz muß mit den Bestimmungen des Landes übereinstimmen, in dem er verwendet werden soll.

- Ausschließlich die für dieses Produkt konstruierten und gelieferten Spezialkabel benutzen.

Europe

- Das Netzkabel muß vom Typ HO3VVF3GO.75 (Mindestanforderung) sein und die Aufschrift <HAR> oder <BASEC> tragen.
- Der Netzstecker muß die Norm CEE 7/7 erfüllen (”SCHUKO”).
- 3Com verlangt von Ihnen die Bestätigung, daß Ihr Chassis die duale Phasenfunktion unterstützt, indem Sie nachprüfen, daß "3C16071A" oder “3C16071B” auf der Seriennummernplakette an der Chassis-Basis, am Frontplatten-Overlay sowie am Verpackungsetikett erscheint. Falls weder A moch B im suffix erscheint, sorgt 3C16071 nicht für duale Phasenunterstützung und muß von AC-Quellen derselben Phase gespeist werden.
- Vor Wartungsarbeiten müssen beide Wechselstromnetzkabel abgezogen werden.

B TECHNICAL SPECIFICATIONS

SuperStack 3 Advanced RPS Chassis

Physical Dimensions (chassis empty)	Height: 90 mm (2U) x Width: 440 mm (17.3 in.) x Depth 370 mm (14.5 in.) Weight: 8.5 Kg (18.7 lb)
Environmental Requirements	
Operating Temperature	0° to 50°C (32° to 122°F)
Storage Temperature	–10° to +70°C (14° to 158°F)
Operating Humidity	10 to 95% relative humidity, non-condensing
Standards	EN60068 to 3Com schedule (Package testing: paras 2.1, 2.2, 2.30, and 2.32. Operational testing: paras 2.1, 2.2, 2.30 and 2.13).
Safety	
Agency Certifications	IEC 60950, UL 1950, EN60950, CSA 22.2 No. 950
EMC	
Emissions	CISPR22 Class A EN55022 Class A FCC Part 15 Subpart B Class A ICES-003 Class A VCCI Class A AS/NZS3548 Class A CNS13438 Class A EN61000-3-2 EN61000-3-3
Immunity	EN55024
Output Power	480 W (650 W when used with Type 3 Power Modules)
Power Supply (chassis with no Power Module installed)	
AC Line Frequency	50/60 Hz
Input Voltage Options	115/230 VAC
Current Rating	115 V 12 amps 230 V 5 amps

Power Modules

Electrical

Type 1 60 W Power Module

Typical Input power: 100 W

Maximum power output	
5 V	8.5 A
12.6 V	2.5 A
–12.0 V	1.0 A
Total output power: 60 W maximum.	

Type 1 100 W Power Module

Typical Input Power: 167 W

Maximum power output	
5 V	15.0 A
12.6 V	2.5 A
–12.0 V	1.0 A
Total output power: 100 W maximum.	

Type 2A (100 W) Power Module

Typical Input Power: 167 W

Maximum power output	
3.3 V	25.0 A
5 V	15.0 A
12.6 V	2.5 A
Total output power: 100 W maximum.	

Type 3 (325 W) Power Module

CAUTION: *The Type 3 DC Power Module is for installation by suitably qualified service personnel only. Refer to the Type 3 Power Module Installation Guide.*

Typical Input Power: 365 W

Maximum power output	
27 V	12.0 A
Total continuous output power: 325 W maximum.	

Physical Dimensions

Weight:	550g (1.21lb)
Height:	40 mm (1.6 in.)
Width:	86 mm (3.4 in.)
Depth:	267 mm (10.5 in.)

C

MODULE CONFIGURATIONS

SuperStack 3 Advanced RPS Chassis Loading Limitations

WARNING*: Do not overload the chassis — refer to Table 2 “Maximum Number of Advanced RPS Power Modules per Chassis” to determine loading limitations. It is important that the loading limitations are not exceeded.*

ATTENTION*: Ne surchargez pas le châssis — référez-vous au Tableau 2 "Maximum Number of Advanced RPS Power Modules per Chassis" pour déterminer les limitations de charge. Il est important que ces limitations de chargement ne soient pas excédées.*

WARNUNG*: Bitte überladen Sie nicht das Chassis — bezugnehmend auf Tabelle 2 "maximale Anzahl der Advanced RPS Powermodule per Chassis" und halten Sie die Limitierung ein. Es ist wichtig, daß Sie die Limitierung nicht überschreiten.*

Valid Configurations

Single Module Configurations

The maximum output DC power of the Advanced RPS is 480 W. However, this can be exceeded only if installing two Type 3 Power Modules. All other power module combinations must not exceed 480 W. Refer to Table 2 for details on the chassis loading limitations and configuration recommendations.

The following examples are provided for guidance. You may power (using the standard DC output cables) the combinations shown in Table 2. If you are using a pair of modules, connected by a ’Y’ cable in full redundancy mode, these two count as one module.

CAUTION: *The Advanced RPS chassis (3C16071A and 3C16071B) does not support the Type 2 Power Module (3C16074). You must use a Type 2A Power Module (3C16074A).*

Type 2 or Type 2A Power Modules may be used in combinations similar to the Type 1 100 W Power Modules.

Table 2 Maximum Number of Advanced RPS Power Modules per Chassis

Configuration	Type 1 60 W Module (3C16072)	Type 1 100 W Module (3C16073), Type 2 (100 W) Module (3C16074), or Type 2A (100W) Module (3C16074A)	Type 3 Module (325 W) (3C16075)*
A	8	none	none
B	7	none	none
C	6	1	none
D	5	1	none
E	4	2	none
F	3	3	none
G	2	3	none
H	1	4	none
I	none	4	none
J†	none	1	1
K‡	1	1	1
L**	2	none	1
M††	none	none	2
N‡‡	none	none	4

* ***CAUTION:*** *The Type 3 DC Power Module is for installation by suitably qualified service personnel only. Refer to the Type 3 Power Module Installation Guide.*

† Install the power modules in slots 7 and 8.

‡ Install the 100 W and Type 3 Module in slots 7 and 8, and the 60 W Module in slot 5 or 6, whichever is next to the 100 W Module.

**Install the Type 3 Module in slot 7, and the 60 W Modules in slots 8 and 5.

††Install two Type 3 Modules in the chassis using single DC cables, that is, both modules drawing power separately. If using this configuration, install the modules in slots 7 and 8.

‡‡Install four Type 3 Modules in the chassis using the optional ‘Y’ cable. Two modules that are paired, power-share at any one time. If using this configuration, install the four modules in slots 5, 6, 7, and 8. Connect the ‘Y’ cables across slots 7 and 5, and 8 and 6 respectively, that is, the power modules in slots 7 and 5 are paired, and the power modules in 8 and 6 are paired.

Full Redundancy Configurations

If you want a fully redundant configuration, you can pair power modules (of the same type) in the chassis, provided you use Y-cables of the appropriate type to connect a pair of modules to a single SuperStack unit. The two modules count as one module. This is then subject to the loading limitations and configuration recommendations detailed in Table 2.

CAUTION: *You must not pair power modules of different types and power ratings, for example, do not pair a 60 W Type 1 with a 100 W Type 1, a Type 2 with a Type 2A or a Type 3, and so on.*

Invalid Configurations

You must not:

- Use any configuration where the total output DC power is greater than 480 W (unless you are installing two Type 3 Power Modules). For example, five Type 1 100 W or Type 2 (100W) modules using the standard DC cable supplied with the modules will cause over-heating to occur within the chassis.
- Connect a power module to a SuperStack unit whose input DC power exceeds the output DC power of the power module.

The documentation that accompanies your SuperStack unit will provide additional information on its compatibility with the Advanced RPS chassis and power modules.

Power Module Usage

The following lists give, in 3C number order, the SuperStack products that the different power modules can support. If there is an asterisk (*) by the product number, that product has the auto-enable feature.

The details are correct at the time of printing this manual, but are subject to change. If you are in doubt, consult the product user guide or your supplier for the latest information.

SuperStack Products requiring a Type 1 60 W Power Module	
3C215A	Hub 100 Management Unit
3C250-T4	Hub 100 T4 (also with 3C252 or 3C262 Module fitted)
3C250A-TX/I	Hub 100 TX (also with 3C252 or 3C262 Modules fitted)
*3C7204A	AccessBuilder® 2204
*3C7208A	AccessBuilder 2208
3C8200C	NETBuilder® 200
3C8201C	NETBuilder 201
3C8221C	NETBuilder 221
3C8222C	NETBuilder 222
3C8223C	NETBuilder 223
3C8224C	NETBuilder 224
3C8227C	NETBuilder 227
3C8228C	NETBuilder 228
3C8252A	LinkConverter™ II 252
3C8254A	LinkConverter II 254
3C8323C	NETBuilder 323
3C8327C	NETBuilder 327
3C8352A	LinkConverter II 352
3C8354A	LinkConverter II 354
3C8421C	NETBuilder 421
3C8422C	NETBuilder 422
3C8423C	NETBuilder 423
3C8424C	NETBuilder 424
3C8427C	NETBuilder 427
3C8523C	NETBuilder 523
3C8527C	NETBuilder 527
*3C16400	Port Switch Hub 10 12-port (also with a valid combination of 3C1206X Transceiver Modules fitted)
*3C16401	Port Switch Hub 10 24-port (also with a valid combination of 3C1206X Transceiver Modules fitted)
*3C16405	PS Hub 40 12-port (also with a valid combination of 3C1206X Transceiver Modules fitted)

*3C16406	PS Hub 40 24-port (also with a valid combination of 3C1206X Transceiver Modules fitted)
*3C16450	PS Hub 50 24-port (also with a valid combination of 3C1206X Transceiver Modules fitted)
3C16665A	Hub 10 Fiber (also with 3C16630A or 3C16632 Management Module and 3C1206X Transceiver Module fitted)
3C16670A	Hub 10 12-port (also with 3C16630A or 3C16632 Management Module and 3C1206X Transceiver Module fitted)
3C16671A	Hub 10 24-port (also with 3C16630A or 3C16632 Management Module and 3C1206X Transceiver Module fitted)
3C16672A	Hub 10 Telco (also with 3C16630A or 3C16632 Management Module and 3C1206X Transceiver Module fitted)
*3C16954	Switch 610
3C16900A	Switch 1000 24-port (also with 3C1206x or 3C16920/2 modules fitted)
3C16901A	Switch 1000 12-port (also with 3C1206x or 3C16920/2 modules fitted)
*3C16950	Switch 1100 24-port (also with 3C1206x or 3C16920/2 modules fitted)
*3C16951	Switch 1100 12-port (also with 3C1206x or 3C16920/2 modules fitted)
*3C16902	Desk Top Switch (also with 3C1206x or 3C16920/2 modules fitted)
3C16940A	Switch 3000 FX (also with 3C1206x or 3C16920/2 modules fitted)
3C16941A	Switch 3000 TX (also with 3C16920/2 modules fitted)
3C32700A	Switch 2700 OC-3 Multimode ATM
3C32710A	Switch 2700 DS-3 ATM
3C32711A	Switch 2700 OC-3 Singlemode ATM
3C510510B	Hub TR 12-port (also with mixes of 3C51050X RI/RO Modules and 3C510502 or 3C510505 RMON Modules fitted)
3C510511B	Hub TR 24-port (also with mixes of 3C51050X RI/RO Modules and 3C510502 or 3C510505 RMON Modules fitted)
3C510600	Switch 2000

3C94103R-CSIX	Open Partner Boundary Router 1
3C94103R-CSD	Open Partner Boundary Router 2
3C94103R-CSDI	Open Partner Boundary Router 3
3C94103R-CSE	Open Partner Boundary Router 4
3C94117C-XS	Open Partner Comms Server 16-port
3C94133C-XS	Open Partner Comms Server 32-port
3C94101M-SDEK	Open Partner Single Slot SS II Access
3C220000A	Switch 2200 without modules

SuperStack Products requiring a Type 1 100 W Power Module	
3C16900A	Switch 1000 24-port fitted with 3C16930 module
3C16901A	Switch 1000 12-port fitted with 3C16930 module
*3C16950	Switch 1100 24-port fitted with 3C16970/1/5 modules
*3C16951	Switch 1100 12-port fitted with 3C16970/1/5 modules
*3C16902	Desk Top Switch fitted with 3C16930 module
3C16940A	Switch 3000 FX fitted with 3C16930 module
3C16941A	Switch 3000 TX fitted with 3C16930 module
*3C16942	Switch 3000 TX 12-port (also with 3C16920/2 or 3C16930 modules fitted)
3C220000A	Switch 2200 with modules

SuperStack Products requiring a Type 2 or Type 2A (100 W) Power Module	
*3C250C–xx	Hub 100C range (the older 3C250 and 3C250B use the 60 W (3C16072) module).
*3C510–SX	Hub 1000 SX
*3C16610	Dual Speed Hub 500 12-port
*3C16611	Dual Speed Hub 500 24-port
*3C16980	Switch 3300 24-port
*3C16981	Switch 3300 12-port
*3C16982	Switch 3300FX
*3C16984	Switch 630
*3C16985A	Switch 3300 XM
*3C16986	Switch 3300 TM

*3C16987	Switch 3300 SM
*3C16988	Switch 3300 MM
*3C39024/36	Switch 3900
*3C93011/2	Switch 9300
*3C16464	Baseline 10/100 Switch 12-port
*3C16465	Baseline 10/100 Switch 24-port

SuperStack Products requiring a Type 3 Power Module	
*3C17700	Switch 4900
*3C17702	Switch 4900SX

Units not supported

SuperStack Products NOT supported by the Advanced RPS	
3C16910	Switch 3800
3C16990	Switch 9000
3C81600	Enterprise Monitor (including various RMON Probes)
3C8930A	DC Voltage Converter 3-port
3C8960A	DC Voltage Converter 6-port
3C16010/1/2	UPS
3C565047A	RPS

Obsolete Products

The following products have been replaced by SuperStack units, but the Advanced RPS will support them.

Superseded Products requiring a 60 W Type 1 Power Module

LinkBuilder® Hubs	
3C215A	Hub 100 Management Unit
3C250-TX	FMS 100 TX
3C16665	FMS II Fiber (also with 3C16630A or 3C16632 Management Module and 3C1206X Transceiver Module fitted)
3C16670	FMS II 12-port TP (also with 3C16630A or 3C16632 Management Module and 3C1206X Transceiver Module fitted)
3C16671	FMS II 24-port TP (also with 3C16630A or 3C16632 Management Module and 3C1206X Transceiver Module fitted)
3C16672	FMS II Telco (also with 3C16630A or 3C16632 Management Module and 3C1206X Transceiver Module fitted)
3C510510B	FMS TR 12-port
3C510511B	FMS TR 24-port

NETBuilder Routers	
3C8200C	NETBuilder Remote Office 200
3C8201C	NETBuilder Remote Office 201
3C8221C	NETBuilder Remote Office 221
3C8222C	NETBuilder Remote Office 222
3C8223C	NETBuilder Remote Office 223
3C8224C	NETBuilder Remote Office 224
3C8227C	NETBuilder Remote Office 227
3C8228C	NETBuilder Remote Office 228
3C8323C	NETBuilder Remote Office 323
3C8327C	NETBuilder Remote Office 327
3C8421C	NETBuilder Remote Office 421
3C8422C	NETBuilder Remote Office 422

3C8423C	NETBuilder Remote Office 423
3C8424C	NETBuilder Remote Office 424
3C8427C	NETBuilder Remote Office 427
3C8523C	NETBuilder Remote Office 523
3C8527C	NETBuilder Remote Office 527

LinkSwitch	
3C16900	LinkSwitch 1000 24-port (also with 3C1206x or 3C16920/2 modules fitted)
3C16901	LinkSwitch 1000 12-port (also with 3C1206x or 3C16920/2 modules fitted)
3C16940	LinkSwitch 3000 (also with 3C1206x or 3C16920/2 modules fitted)
3C16941	LinkSwitch 3000 TP (also with 3C16920/2 modules fitted)
3C32700A	Switch 2700 OC-3 Multimode ATM
3C32710A	Switch 2700 DS-3 ATM
3C32711A	Switch 2700 OC-3 Singlemode ATM

AccessBuilder	
3C7204	AccessBuilder 2204
3C7208	AccessBuilder 2208

LinkConverter	
3C8252A	LinkConverter II 252
3C8254A	LinkConverter II 254
3C8352A	LinkConverter II 352
3C8354A	LinkConverter II 354

Superseded Product requiring a 100 W Power Module	
3C16900	LinkSwitch 1000 24-port with 3C16930 module fitted
3C16901	LinkSwitch 1000 12-port with 3C16930 module fitted
3C16940	LinkSwitch 3000 with 3C16930 module fitted
3C16941	LinkSwitch 3000 TP with 3C16930 module fitted

3C32700A	Switch 2700 OC-3 Multimode ATM
3C32710A	Switch 2700 DS-3 ATM
3C32711A	Switch 2700 OC-3 Singlemode ATM
3C220000A	LinkSwitch 2200

D TROUBLESHOOTING

If the LEDs on the SuperStack® 3 Advanced RPS chassis indicate a problem refer to Table 3 which contains a list of problems and possible faults.

If you have a problem that is not listed here and you cannot solve it, please contact your local technical support representative. Refer to Appendix E.

Table 3 Problems indicated by LEDs

Problem	**Possible Fault**

No Input LED ON	■ Mains power is not present.
	    ■ AC cable may be incorrectly connected.
	    ■ Power cord may be faulty.
	■ LED has failed. Contact your supplier.

Power module present, No Output LED ON	■ Power module is incorrectly installed. ■ DC cable is not connected. ■ SuperStack unit is not connected. ■ SuperStack unit does not require RPS power. ■ LED has failed. Contact your supplier.
Power module present, Yellow LED ON	■ Power module connected to SuperStack unit whose requirement exceeds the DC output available. ■ Power module output is out of specification. Contact your supplier. ■ Power module has failed. Contact your supplier.

E TECHNICAL SUPPORT

3Com provides easy access to technical support information through a variety of services. This appendix describes these services.

Information contained in this appendix is correct at time of publication. For the most recent information, 3Com recommends that you access the 3Com Corporation World Wide Web site.

Online Technical Services

3Com offers worldwide product support 24 hours a day, 7 days a week, through the following online systems:

- World Wide Web site
- 3Com Knowledgebase Web Services
- 3Com FTP site

World Wide Web Site

To access the latest networking information on the 3Com Corporation World Wide Web site, enter this URL into your Internet browser:

`http://www.3com.com/`

This service provides access to online support information such as technical documentation and software, as well as support options that range from technical education to maintenance and professional services.

3Com Knowledgebase Web Services

This interactive tool contains technical product information compiled by 3Com expert technical engineers around the globe. Located on the World Wide Web at **`http://knowledgebase.3com.com`**, this service gives all 3Com customers and partners complementary, round-the-clock access to technical information on most 3Com products.

3Com FTP Site

Download drivers, patches, software, and MIBs across the Internet from the 3Com public FTP site. This service is available 24 hours a day, 7 days a week.

To connect to the 3Com FTP site, enter the following information into your FTP client:

- Hostname: **`ftp.3com.com`**
- Username: **`anonymous`**
- Password: **`<your Internet e-mail address>`**

You do not need a user name and password with Web browser software such as Netscape Navigator and Internet Explorer.

Support from Your Network Supplier

If you require additional assistance, contact your network supplier. Many suppliers are authorized 3Com service partners who are qualified to provide a variety of services, including network planning, installation, hardware maintenance, application training, and support services.

When you contact your network supplier for assistance, have the following information ready:

- Product model name, part number, and serial number
- A list of system hardware and software, including revision levels
- Diagnostic error messages
- Details about recent configuration changes, if applicable

If you are unable to contact your network supplier, see the following section on how to contact 3Com.

Support from 3Com

If you are unable to obtain assistance from the 3Com online technical resources or from your network supplier, 3Com offers technical telephone support services. To find out more about your support options, call the 3Com technical telephone support phone number at the location nearest you.

When you contact 3Com for assistance, have the following information ready:

- Product model name, part number, and serial number
- A list of system hardware and software, including revision levels
- Diagnostic error messages
- Details about recent configuration changes, if applicable

Here is a list of worldwide technical telephone support numbers:

Country	Telephone Number
Asia, Pacific Rim	1 800 678 515
Australia	800 933 486
Hong Kong	+61 2 9937 5085
India	001 800 61 009
Indonesia	0531 61 6439
Japan	1800 801 777
Malaysia	0800 446 398
New Zealand	+61 2 9937 5083
Pakistan	1235 61 266 2602
Philippines	10800 61 00137 or
P.R. of China	021 6350 1590
Singapore	800 6161 463
S. Korea	82 2 3455 6455
From anywhere in S. Korea:	00798 611 2230
From Seoul:	00798 611 2230
Taiwan, R.O.C.	0080 611 261
Thailand	001 800 611 2000
Europe	
From anywhere in Europe, call:	+31 (0)30 6029900 phone
	+31 (0)30 6054396 fax
Europe, South Africa, and Middle East	
From the following countries, you may use the toll-free numbers:	

Country	Telephone Number
Austria	0800 297468
Belgium	0800 71429
Denmark	800 17309
Finland	0800 113153
France	0800 917959
Germany	0800 1821502
Hungary	06800 12813
Ireland	1800 553117
Israel	1800 9453794
Italy	1678 79489
Luxembourg	0800 3625
Middle East	1800 945 3794
Netherlands	0800 0227788
Norway	800 11376
Poland	00800 3111206
Portugal	0800 831416
Russia	0800 995014
South Africa	0800 995014
Spain	900 983125
Sweden	020 795482
Switzerland	0800 55 3072
U.K.	0800 966197
Latin America	
Argentina	5411 4510 3200
Brazil	0800 13 3266
Colombia	571 629 4827
Mexico	01 800 CARE (01 800 2273)
Puerto Rico	800 666 5065
South America	1800 666 5065
North America	1 800 NET 3Com (1 800 638 3266) Enterprise Customers: 1 800 876-3266

Returning Products for Repair

Before you send a product directly to 3Com for repair, you must first obtain an authorization number. Products sent to 3Com without authorization numbers will be returned to the sender unopened, at the sender’s expense.

To obtain an authorization number, call or fax:

Country	Telephone Number	Fax Number
Asia, Pacific Rim	+ 65 543 6500	+ 65 543 6348
Brazil	5511 523 2725	
Europe, South Africa, and Middle East	+ 31 30 6029900	+ 31 30 6029999
Central and South America	525 201 0075	
From the following countries, you may call the toll-free numbers; select option 2 and then option 2:		
Austria	0800 297468	
Belgium	0800 71429	
Denmark	800 17309	
Finland	0800 113153	
France	0800 917959	
Germany	0800 1821502	
Hungary	00800 12813	
Ireland	1800553117	
Israel	1800 9453794	
Italy	1678 79489	
Netherlands	0800 0227788	
Norway	800 11376	
Poland	00800 3111206	
Portugal	0800 831416	
South Africa	0800 995014	
Spain	900 983125	
Sweden	020 795482	
Switzerland	0800 55 3072	
U.K.	0800 966197	
U.S.A. and Canada	1 800 NET 3Com (1 800 638 3266)	1 408 326 7120 (not toll-free)
	Enterprise Customers: 1 800 876 3266	

INDEX

Numerics

3Com Knowledgebase Web Services 53
3Com URL 53

A

Advanced RPS Chassis
    dimensions 37
    size 37
    weight 37
air flow 22, 24
auto-enable feature 18, 27

C

Cables
    'Y' DC 16
    connecting 26
    redundancy 16
    standard DC 16
configurations
    full redundancy 19
    managed redundancy 18
    standard useage 18
conventions
    notice icons, About This Guide 8

D

Dual phase support 13

F

FTP site 54
fuses 25

L

LEDs 12
loading limitations, chassis 41

M

mains AC power
    Backup Pwr B 13, 27
    power sockets 13
    Primary Pwr A 13, 27
management module 14
MIBs 54

N

network supplier support 54

O

online technical services 53

P

power cord 28, 30
power cycle 19, 27
Power Module
    dimensions 39
    electrical 38
    full redundancy configurations 43
    invalid configurations 43
    LEDs 12
    single module configurations 41
    slots 14
    Type 1 100 W 15
    Type 1 60 W 15
    Type 2A (100 W) 15
    Type 3 (310 W) 16
powering up 27

R

rack mounting an Advanced RPS
  - rack mounting kit 23
  - runners 23
  - tray 23

returning products for repair 56
RPS connector 19

S

Safety Information
  - English 29
  - French 32
  - German 34

SNMP 14
stacking units 24

T

technical support
  - 3Com Knowledgebase Web Services 53
  - 3Com URL 53
  - network suppliers 54
  - product repair 56

U

UPS (Uninterruptible Power System) 14, 28
URL 53

W

World Wide Web (WWW) 53

3Com Corporation LIMITED WARRANTY

This warranty applies to customers located in the United States, Australia, Canada (except Quebec), Ireland, New Zealand, U.K., and other English language countries, and countries for which a translation into the local language is not provided

SuperStack® 3 Advanced Redundant Power System (3C16071B)

HARDWARE

3Com warrants to the end user ("Customer") that this hardware product will be free from defects in workmanship and materials, under normal use and service, for the following length of time from the date of purchase from 3Com or its authorized reseller:

Lifetime, for as long as the original Customer owns the product (not transferable to a subsequent end user)

3Com's sole obligation under this express warranty shall be, at 3Com's option and expense, to repair the defective product or part, deliver to Customer an equivalent product or part to replace the defective item, or if neither of the two foregoing options is reasonably available, 3Com may, in its sole discretion, refund to Customer the purchase price paid for the defective product. All products that are replaced will become the property of 3Com. Replacement products or parts may be new or reconditioned. 3Com warrants any replaced or repaired product or part for ninety (90) days from shipment, or the remainder of the initial warranty period, whichever is longer.

SOFTWARE

3Com warrants to Customer that each software program licensed from it, except as noted below, will perform in substantial conformance to its program specifications, for a period of ninety (90) days from the date of purchase from 3Com or its authorized reseller. 3Com warrants the media containing software against failure during the warranty period. No updates are provided, unless specifically included in the Included Services section. 3Com's sole obligation under this express warranty shall be, at 3Com's option and expense, to refund the purchase price paid by Customer for any defective software product, or to replace any defective media with software which substantially conforms to applicable 3Com published specifications. Customer assumes responsibility for the selection of the appropriate applications program and associated reference materials. 3Com makes no warranty or representation that its software products will meet Customer's requirements or work in combination with any hardware or applications software products provided by third parties, that the operation of the software products will be uninterrupted or error free, or that all defects in the software products will be corrected. For any third party products listed in the 3Com software product documentation or specifications as being compatible, 3Com will make reasonable efforts to provide compatibility, except where the non-compatibility is caused by a "bug" or defect in the third party's product or from use of the software product not in accordance with 3Com's published specifications or user manual.

THIS 3COM PRODUCT MAY INCLUDE OR BE BUNDLED WITH (1) THIRD PARTY SOFTWARE, OR (2) 3COM SOFTWARE THAT IS LICENSED "AS IS", THE USE OF WHICH IS GOVERNED BY A SEPARATE END USER LICENSE AGREEMENT. THIS 3COM WARRANTY DOES NOT APPLY TO SUCH THIRD PARTY SOFTWARE OR 3COM SOFTWARE LICENSED "AS IS". FOR THE APPLICABLE WARRANTY, PLEASE REFER TO THE END USER LICENSE AGREEMENT GOVERNING THE USE OF SUCH SOFTWARE OR THE ACCOMPANYING DOCUMENTATION RELATING TO SUCH SOFTWARE.

YEAR 2000 WARRANTY

In addition to the Hardware Warranty and Software Warranty stated above, 3Com warrants that each product sold or licensed to Customer on and after January 1, 1998 that is date sensitive will continue performing properly with regard to such date data on and after January 1, 2000, provided that all other products used by Customer in connection or combination with the 3Com product, including hardware, software, and firmware, accurately exchange date data with the 3Com product, with the exception of those products identified at 3Com's Web site, http://www.3com.com/products/yr2000.html, as not meeting this standard. If it appears that any product that is stated to meet this standard does not perform properly with regard to such date data on and after January 1, 2000, and Customer notifies 3Com within ninety (90) days after purchase of the product from 3Com or its authorized reseller, 3Com shall, at its option and expense, provide a software update which would effect the proper performance of such product, repair such product, deliver to Customer an equivalent product to replace such product, or if none of the foregoing is feasible, refund to Customer the purchase price paid for such product.

Any software update or replaced or repaired product will carry a Year 2000 Warranty for ninety (90) days after purchase.

OBTAINING WARRANTY SERVICE

Customer must contact a 3Com Corporate Service Center or an Authorized 3Com Service Center within the applicable warranty period to obtain warranty service authorization. Dated proof of purchase from 3Com or its authorized reseller may be required. Products returned to 3Com's Corporate Service Center must be pre-authorized by 3Com with a User Service Order (USO) number (or a Return Material Authorization (RMA) number or a Service Repair Order (SRO) number, whichever was issued) marked on the outside of the package, and sent prepaid and packaged appropriately for safe shipment, and it is recommended that they be insured or sent by a method that provides for tracking of the package. Responsibility for loss or damage does not transfer to 3Com until the returned item is received by 3Com. The repaired or replaced item will be shipped to Customer, at 3Com's expense, not later than thirty (30) days after 3Com receives the defective product, and 3Com will retain risk of loss or damage until the item is delivered to Customer.

3Com shall not be responsible for any software, firmware, information, or memory data of Customer contained in, stored on, or integrated with any products returned to 3Com for repair, whether under warranty or not.

Dead- or Defective-on-Arrival. In the event a product completely fails to function or exhibits a defect in materials or workmanship within the first forty-eight (48) hours of installation but no later than thirty (30) days after the date of purchase, and this is verified by 3Com, it will be considered dead- or defective-on-arrival (DOA) and a replacement shall be provided prior to 3Com receiving the defective product, but only if Customer provides a purchase order number, credit card number, or other method of payment acceptable to 3Com, to be used if 3Com needs to charge Customer for the replacement, as explained below. The replacement product will normally be shipped not later than three (3) business days after 3Com's verification of the DOA product, but may be delayed due to export or import procedures. The shipment of a replacement product prior to 3Com receiving the defective product is subject to local legal requirements and may not be available in all locations. When such a replacement is provided and Customer fails to return the original product to 3Com within fifteen (15) days after shipment of the replacement, 3Com will charge Customer for the replacement product, at list price.

Shipment of a Replacement Prior to 3Com Receiving the Defective Product is provided for five (5) years, after which time it may be available for a specified fee, but in either case only if Customer provides a purchase order number, credit card number, or other method of payment acceptable to 3Com, to be used if 3Com needs to charge Customer for the replacement, as explained below. 3Com will make commercially reasonable efforts to ship the replacement product not later than five (5) business days after receiving the request for a replacement, but may be delayed due to product availability or export or import procedures. The shipment of a replacement product prior to 3Com receiving the defective product is subject to local legal requirements and may not be available in all locations. When such a replacement is provided and Customer fails to return the original product to 3Com within fifteen (15) days after shipment of the replacement, 3Com will charge Customer for the replacement, at list price. This replacement prior to 3Com receiving the defective product is different from the fee-based Advance Hardware Replacement Service, which is available as a contracted service offering.

INCLUDED SERVICES:

3Com's Electronic Support Services, available at no charge, include 3Com Knowledgebase, information on known bugs, documentation, release notes, and publicly available software and firmware upgrades. 3Com reserves the right to modify or cancel this offering at any time, without advance notice.

Telephone Technical Support, with coverage for basic troubleshooting only, will be provided at no additional charge for 12 months from the date of purchase, on a commercially reasonable efforts basis. Telephone support is provided by 3Com only if Customer purchased this product directly from 3Com, or if Customer's reseller is unable to provide telephone support. To qualify for this telephone technical support, Customer must register on the 3Com Web site at http://support.3Com.com/index.htm, and state the date of purchase, product number, and serial number. 3Com's response to a request for telephone technical support will be in the form of a return call from a 3Com representative by close of business the following business day, defined as 9 a.m. to 5 p.m., local time, Monday through Friday, excluding local holidays. Please refer to the Technical Support appendix in the User Guide for telephone numbers.

Software Updates, All software and firmware upgrades and the latest code for this product downloaded through the 3Com Software Library.

WARRANTIES EXCLUSIVE

IF A 3COM PRODUCT DOES NOT OPERATE AS WARRANTED ABOVE, CUSTOMER'S SOLE REMEDY FOR BREACH OF THAT WARRANTY SHALL BE REPAIR, REPLACEMENT, OR REFUND OF THE PURCHASE PRICE PAID, AT 3COM'S OPTION. TO THE FULL EXTENT ALLOWED BY LAW, THE FOREGOING WARRANTIES AND REMEDIES ARE EXCLUSIVE

AND ARE IN LIEU OF ALL OTHER WARRANTIES, TERMS, OR CONDITIONS, EXPRESS OR IMPLIED, EITHER IN FACT OR BY OPERATION OF LAW, STATUTORY OR OTHERWISE, INCLUDING WARRANTIES, TERMS, OR CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, SATISFACTORY QUALITY, CORRESPONDENCE WITH DESCRIPTION, AND NON-INFRINGEMENT, ALL OF WHICH ARE EXPRESSLY DISCLAIMED. 3COM NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH THE SALE, INSTALLATION, MAINTENANCE OR USE OF ITS PRODUCTS.

3COM SHALL NOT BE LIABLE UNDER THIS WARRANTY IF ITS TESTING AND EXAMINATION DISCLOSE THAT THE ALLEGED DEFECT OR MALFUNCTION IN THE PRODUCT DOES NOT EXIST OR WAS CAUSED BY CUSTOMER'S OR ANY THIRD PERSON'S MISUSE, NEGLECT, IMPROPER INSTALLATION OR TESTING, UNAUTHORIZED ATTEMPTS TO OPEN, REPAIR OR MODIFY THE PRODUCT, OR ANY OTHER CAUSE BEYOND THE RANGE OF THE INTENDED USE, OR BY ACCIDENT, FIRE, LIGHTNING, POWER CUTS OR OUTAGES, OTHER HAZARDS, OR ACTS OF GOD.

LIMITATION OF LIABILITY

TO THE FULL EXTENT ALLOWED BY LAW, 3COM ALSO EXCLUDES FOR ITSELF AND ITS SUPPLIERS ANY LIABILITY, WHETHER BASED IN CONTRACT OR TORT (INCLUDING NEGLIGENCE), FOR INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, OR PUNITIVE DAMAGES OF ANY KIND, OR FOR LOSS OF REVENUE OR PROFITS, LOSS OF BUSINESS, LOSS OF INFORMATION OR DATA, OR OTHER FINANCIAL LOSS ARISING OUT OF OR IN CONNECTION WITH THE SALE, INSTALLATION, MAINTENANCE, USE, PERFORMANCE, FAILURE, OR INTERRUPTION OF ITS PRODUCTS, EVEN IF 3COM OR ITS AUTHORIZED RESELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, AND LIMITS ITS LIABILITY TO REPAIR, REPLACEMENT, OR REFUND OF THE PURCHASE PRICE PAID, AT 3COM'S OPTION. THIS DISCLAIMER OF LIABILITY FOR DAMAGES WILL NOT BE AFFECTED IF ANY REMEDY PROVIDED HEREIN SHALL FAIL OF ITS ESSENTIAL PURPOSE.

DISCLAIMER

Some countries, states, or provinces do not allow the exclusion or limitation of implied warranties or the limitation of incidental or consequential damages for certain products supplied to consumers, or the limitation of liability for personal injury, so the above limitations and exclusions may be limited in their application to you. When the implied warranties are not allowed to be excluded in their entirety, they will be limited to the duration of the applicable written warranty. This warranty gives you specific legal rights which may vary depending on local law.

GOVERNING LAW

This Limited Warranty shall be governed by the laws of the State of California, U.S.A., and by the laws of the United States, excluding their conflicts of laws principles. The United Nations Convention on Contracts for the International Sale of Goods is hereby excluded in its entirety from application to this Limited Warranty.

3Com Corporation
5400 Bayfront Plaza
P.O. Box 58145
Santa Clara, CA 95052-8145
(408) 326-5000

June 23, 2000

REGULATORY NOTICES

FCC STATEMENT

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference to radio communications, in which case the user will be required to correct the interference at their own expense.

INFORMATION TO THE USER

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Relocate the equipment with respect to the receiver.
- Move the equipment away from the receiver.
- Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

How to Identify and Resolve Radio-TV Interference Problems

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

In order to meet FCC emissions limits, this equipment must be used only with cables which comply with IEEE 802.3.

CSA STATEMENT

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

VCCI STATEMENT

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＡ情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

BSMI STATEMENT

警告使用者：這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

CE STATEMENT (EUROPE)

This product complies with the European Low Voltage Directive 73/23/EEC and EMC Directive 89/336/EEC as amended by European Directive 93/68/EEC.

Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.